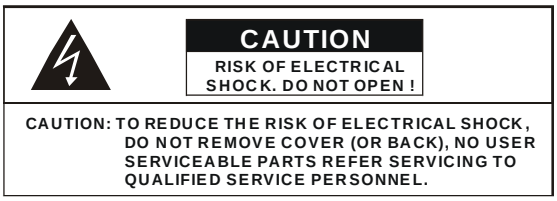
Thank you for purchasing our product. Please read this User Manual before using the product.

CCT708 - 8 Channel DVR

User Manual

VERSION 001

SAFETY PRECAUTIONS


CAUTION
RISK OF ELECTRICAL SHOCK. DO NOT OPEN !
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK), NO USER SERVICEABLE PARTS REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This label may appear on the bottom of the unit due to space limitations.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of an important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNITS NOT SPECIFICALLY DESIGNED FOR OUTDOOR USE TO RAIN OR MOISTURE.

Attention: installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

"CAUTION: Do not expose to extreme temperatures. Use the product within the following temperature ranges - 5°C ~ 45°C. "

Do not use this unit in direct strong sunlight.

Warranty and Service

During the warranty period (one year), we will repair or replace the DVR free of charge.

Be sure to have the model number, serial number and vendor sticker on the hard disk for service representative.

ABOUT THIS DOCUMENT

Before installing this DVR, be sure to thoroughly read the instructions in this User Manual.

Before reading this document

1. This document is intended for both the installer and user of the CCT708 DVR.
2. This manual contains information for configuring, managing and using this DVR.
3. To prevent fire or electrical shock, do not expose the product to heat or moisture.
4. For questions and technical assistance on this product, contact your installer.

►Important recommendations for the installation of this DVR unit

1. Check that the electricity supply at the place you want to install the DVR unit is stable and meets our requirements. Unstable electricity will cause malfunction of the unit or cause critical damage to the unit. It is recommended that this unit is connected to a power surge protection unit.

2. Several chips on the main board of the DVR unit and hard disk drive inside the unit generate heat, and it must be properly discharged. Do not put any objects against the fan situated at the rear of the unit on the right hand side.

3. Put the DVR unit in a well-ventilated place and do not put heat-generating objects on the unit. When it is installed in a mounting rack together with other devices, please check that the built-in ventilation fan in the rack is running properly.

CONTENTS TABLE

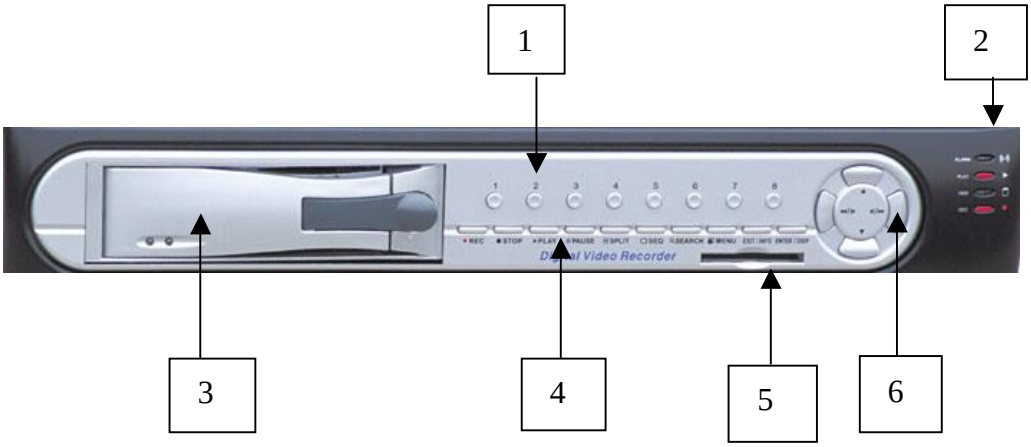
SAFETY PRECAUTIONS..... 2
ABOUT THIS DOCUMENT..... 3
CONTENTS TABLE 4
FEATURES 5
UNIT DESCRIPTION OF FRONT PANEL & CONTROLS 6
UNIT DESCRIPTION OF REAR PANEL 7
INSTALLATION 8
SPECIAL NOTES BEFORE USING THIS EQUIPMENT 9
LIVE MODE OPERATION 10
RECORD MODE 13
PLAYBACK MODE 14
SEARCH 16
MENU SETUP DESCRIPTION 17
DATE/TIME SETUP 18
EDIT CAMERA TITLE 1 ~ 8 19
VIDEO ADJUST 20
MOTION DETECTION 20
MOTION DETECTION – SET DETECTION AREA 21
RECORD SETUP 22
SCHEDULE SETUP 23
HARD DISK SETUP 24
CF CARD SETUP 25
CF CARD COPY 26
OTHERS 27
PASSWORD 28
BUZZER 29
RELAY OUTPUT 30
ALARM INPUT 31
SEQUENCE DWELL TIME 32
FACTORY DEFAULT 33
HARD DISK INFORMATION & RECORDING TIMES 34
DB25 ALARM INPUT/RELAY OUTPUT DEFINITION 35
TECHNICAL SPECIFICATION 36

The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information herein.

FEATURES

- 8-Channel video recording and 1-Channel audio recording.
- 2-Video outputs to monitor, 1-video output to SPOT, and 2-audio outputs.
- Auto NTSC/ PAL video format detection.
- Auto video loss detection and alarm alert.
- 8-Alarm signal input and 1-Relay output (auto alarm recording).
- High-capacity removable hard disk (up to 750 GB capacity), digital image storage replaces tape-based mechanical systems.
- Auto overwrite or alarm notification when hard disk is full, reduces manpower management.
- Power-loss memory function, designed to reboot and continue recording.
- Motion-JPEG video and G.711 audio compression format.
- Maximum recording rate is 60fps@704x240 (NTSC) or 50pfs@704x288 (PAL).
- Adjustable recording quality and frame rates for recording.
- 4 Types of record mode: Manual, Schedule Alarm, Schedule Motion Detection and Schedule Continue.
- Monitoring or recording can be shown by full, quad screen, 9-split and by auto sequential switching.
- Quick efficient playback search by Date & Time.
- Backup recorded images by Compact Flash card (PC supports AVI file playback).
- Firmware update by Compact Flash card.
- Includes RS-232C interface for Video Server connection.

UNIT DESCRIPTION OF FRONT PANEL & CONTROLS



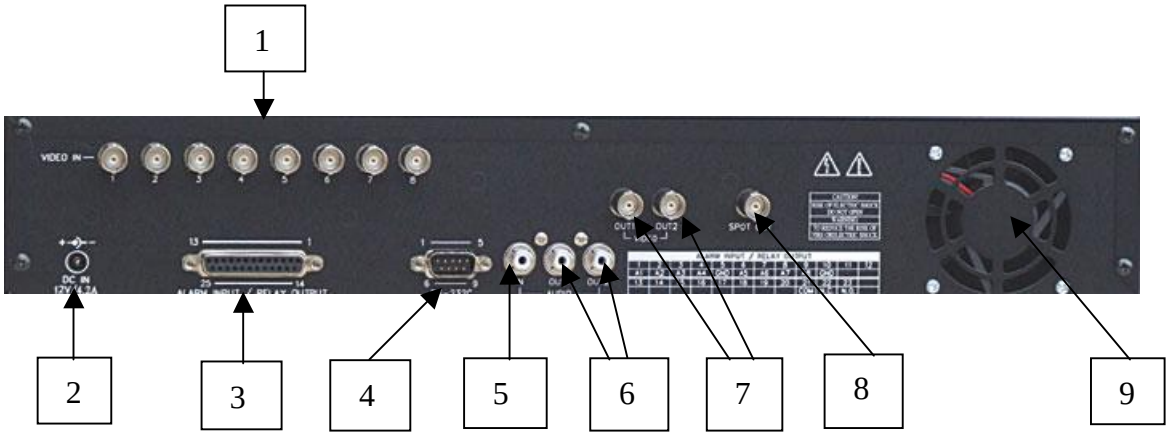
1. **CAMERA SELECT (1-8 VIDEO CHANNEL BUTTONS)**
2. **LED INDICATOR (ALARM/PLAYBACK/HDD/RECORD)**
3. **REMOVEABLE HARD DISK DRIVE CARTRIDGE CADDY (MAX 750Gb)**
4. **FUNCTION BUTTONS:**

REC:	**Manual Record**
STOP:	**Stop Button (Manual Record/Play)**
PLAY:	**Play Button**
PAUSE:	**Pause Button**
SPLIT:	**Full Screen / Quad / 9 Split screen**
SEQ:	**Auto Sequencing button**
SEARCH:	**Quick Search on data recorded**
MENU:	**Menu Setup button**
EXIT/INFO:	**Return to Previous Menu / System Information Display**
ENTER / DISP:	**Confirm button / Message Display**

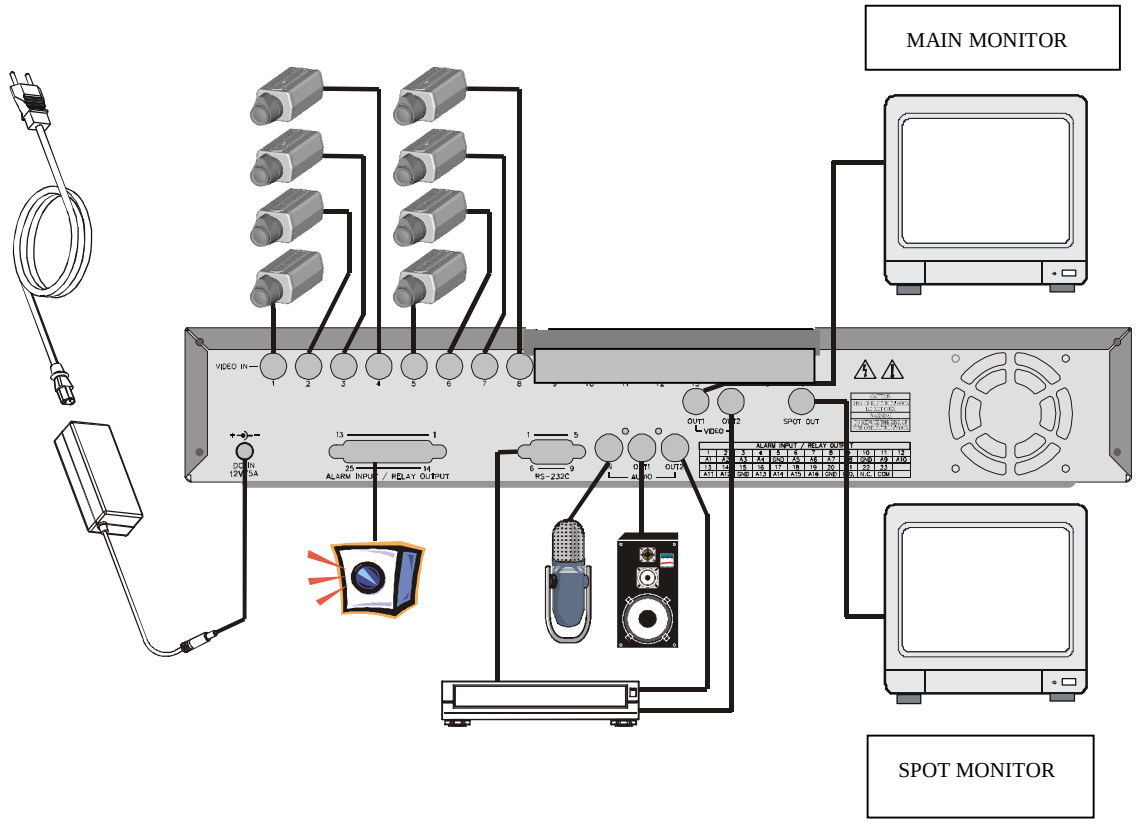
5. **C.F CARD SLOT**
6. **DIRECTION KEYS**

LEFT:	**Decreases the Value Setting / Step Rewind Playback**
	Fast Rewind Playback (speed adjustable)
RIGHT:	**Increases the Value Setting / Step Forward Playback**
	Fast Forward Playback (speed adjustable)
UP:	**Moves Cursor Upwards / Forward Switching Channel Display**
DOWN:	**Moves Cursor Downwards / Rewind Switching Channel Display**

UNIT DESCRIPTION OF REAR PANEL



1. **VIDEO INPUT:** **8 CHANNEL BNC INPUT TERMINALS**
2. **DC POWER INPUT:** **12V DC / 4.2 AMPS**
3. **ALARM INPUT / RELAY OUTPUT:** **DB25 FEMALE TERMINAL**
4. **RS-232C:** **DB9 MALE TERMINAL**
5. **MICROPHONE INPUT:** **1 CHANNEL RCA INPUT**
6. **SPEAKER OUTPUTS:** **2 CHANNEL BNC OUTPUTS**
7. **MAIN MONITOR OUTPUTS:** **2 CHANNEL BNC OUTPUTS**
8. **SPOT MONITOR OUTPUT:** **1 CHANNEL BNC OUTPUT**
9. **FAN**



INSTALLATION

Procedure

1) Camera Connection

Connect the cameras to the CAMERA INPUT BNC connections on the Rear Panel of the 8 CH DVR.

2) Microphone Input Connection

Connect the microphone to the AUDIO INPUT on the Rear Panel using an RCA plug (phono).

3) Monitor Connection (Composite Connection Method)

Connect the MAIN monitor to the video OUT 1 BNC connector. A second video monitor OUT 2 can also be used.

4) Spot Monitor Connection (Composite Connection Method)

Connect the SPOT monitor to the SPOT OUT BNC connector.

5) Audio Output to speaker connection

Connect the speaker to the AUDIO OUT 1 RCA connector.

6) Video Server connection

An RS232C connection on the rear of the unit can be used to connect a video server but of course the video server must have a corresponding RS232C connection. Connect video OUT 2 to the video server video input terminal and audio OUT 2 to the audio input terminal.

7) Power Supply adaptor

This DVR runs on 12V DC at 4.2AMP. Ensure that the power supply unit provided is used or a similar rated 12V regulated psu.

There are no network connection facilities available on this DVR.

BEFORE CONNECTING POWER TO THIS DVR PLEASE READ THE NOTES ON THE NEXT PAGE.

SPECIAL NOTES BEFORE USING THIS EQUIPMENT

1) HARD DRIVE

This DVR holds one hard drive in a front loading caddy. The unit is not hot swappable. To prevent damage to the DVR never remove the hard drive unless all recording function has been switched off and the DVR has been powered down. If the hard disk information icon turns red, this indicates that the hard disk requires replacement.

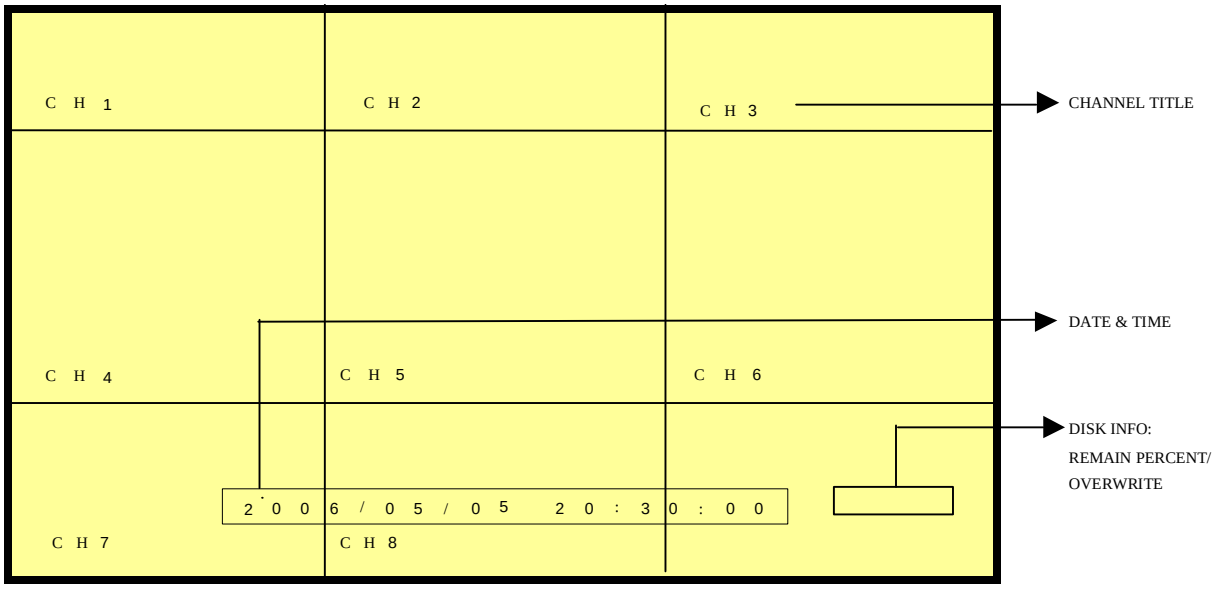
2) AUTO DETECT NTSC OR PAL

After the DVR is powered up the system will automatically detect the video system i.e NTSC or PAL by interrogating the first camera connected. If no camera has been connected, the video system will be selected as per previous setup. Therefore when first using this DVR ensure that a least one camera is connected so that PAL is selected in the UK. Note if all colour cameras only come up in black and white mode, leave them connected, power down and then up again, to resolve problem.

3) DISPLAY MODE

After the DVR powers up it will automatically enter 9 split screen mode and initiate recording according to the previously set recording schedule.

LIVE MODE OPERATION



1) ENTER/DISP SWITCH

Press DISP button to switch on or off the channel, date and time message display.

2) EXIT/INFO SWITCH

Press INFO button to switch on or off system information display.

3) HARD DISK INFORMATION ICON

If the Hard Disk Information Icon turns red this indicates that the hard drive needs replacing.

4) CHANNEL NUMBER SELECTION

Press Channel number buttons to select full screen display for that channel. Channels 1 ~ 8.

5) FULL SCREEN / QUAD / 9 WAY SPLIT

Press SPLIT button to change display from Full Screen, Quad and 9 way split.

6) SEQUENCING ORDER DISPLAY

Press SEQ button to switch on or off the sequencing function. Note that full screen channel auto sequence will automatically skip any channel with video loss.

7) VIDEO LOSS

If video loss occurs , a “video loss” message will be displayed.

8) ALARM TRIGGERED EVENT

During an alarm triggered event the corresponding channel name will be changed to colour red.

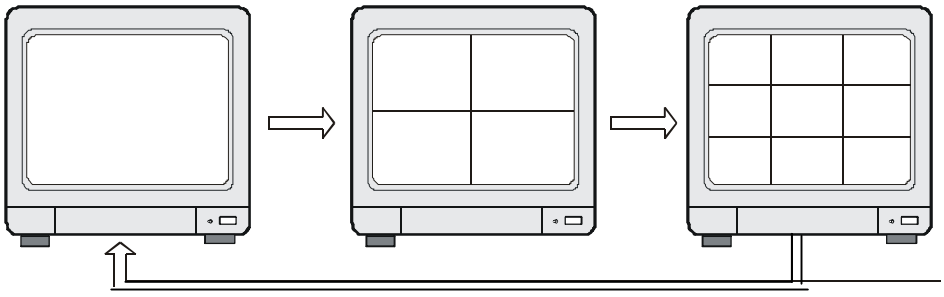
9) MOTION TRIGGERED EVENT

During a motion triggered event the corresponding channel name will be changed to colour red “M”.

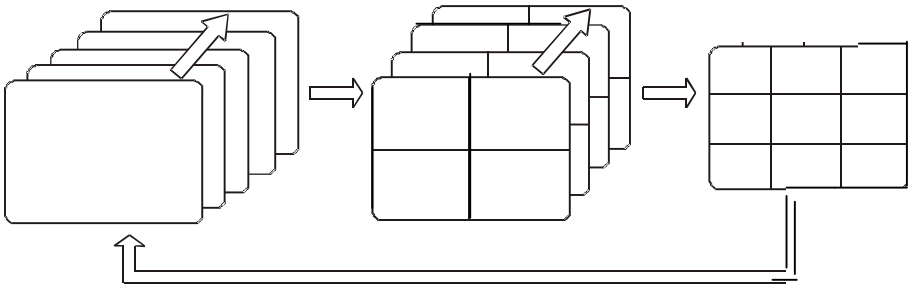
10) ALARM EVENT & SPOT MONITOR

When an alarm event occurs, the SPOT MONITOR will immediately switch to the video image of the channel that has been triggered by the alarm event, and then returns to the previous channel switching status.

NOTE: LIVE MODE OPERATION DOES NOT AFFECT RECORDING FUNCTION.



FULL DISPLAY AND QUAD DISPLAY SWITCHING ORDER

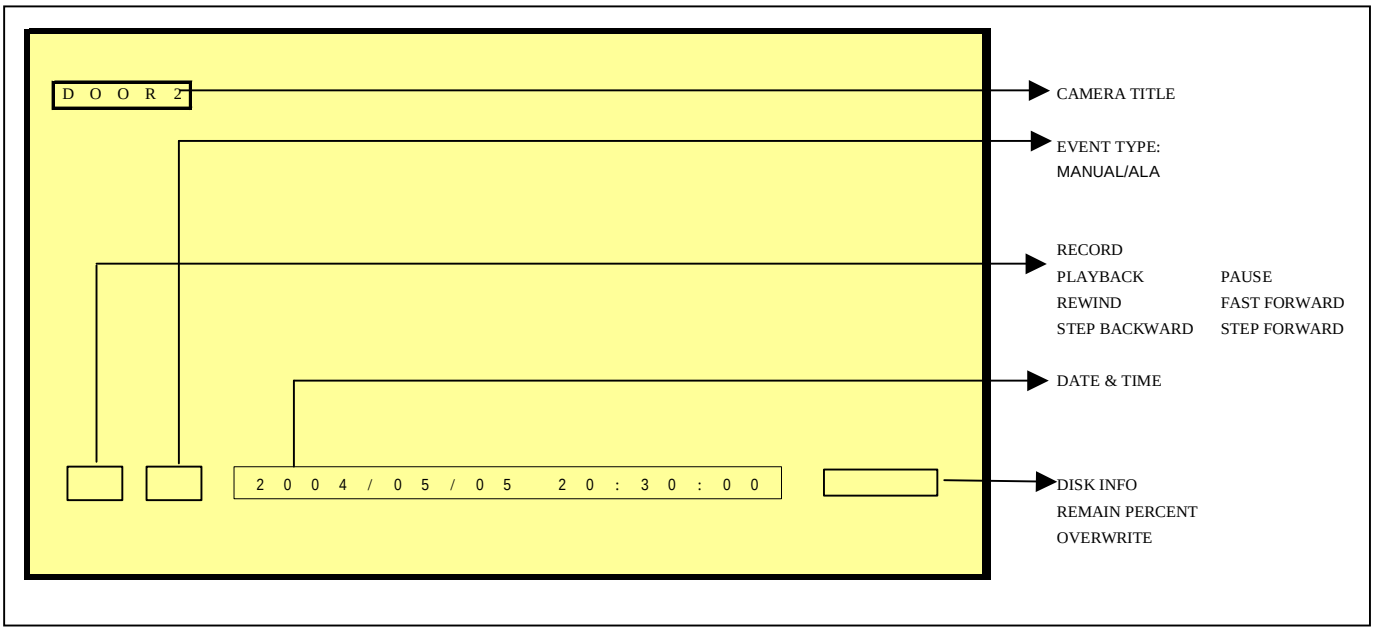


FULL DISPLAY AND QUAD DISPLAY SEQUENCING ORDER

SYSTEM INFORMATION

SYSTEM VERSION		: V1.0
IMAGE QUALITY		: HIGH
MANUAL	IPS	: 60
CONTINUE	IPS	: 20
MOTION DETECT	IPS	: 30
ALARM	IPS	: 40
AUDIO		: ON
AUDIO ON VIDEO		: CH1
DISK FULL		: OVERWRITE
HDD TOTAL CAPACITY		: 250GB
HDD REMAIN CAPACITY		: 130GB

RECORD MODE



1. **RECORDING AND LIVE MONITORING**
   Live monitoring has no effect on recording functions.

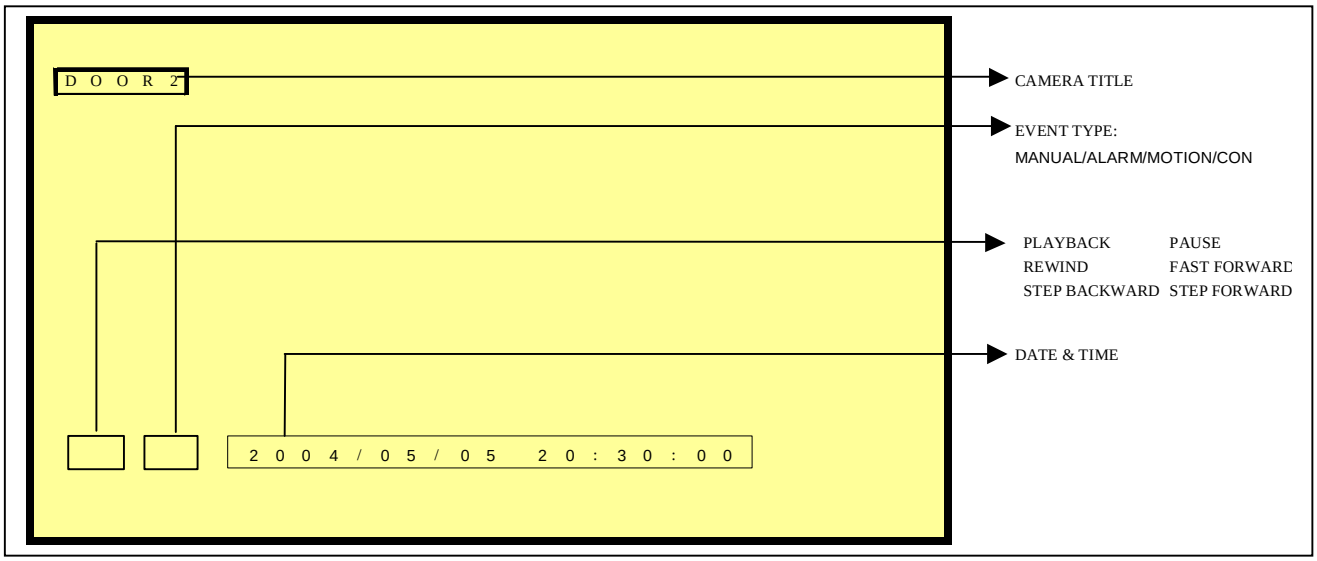
2. **MANUAL RECORDING**
   Manual Record: In monitoring mode, press “REC” button to enable all (CH1 – CH 8) camera recordings, and “STOP” button to stop manual recording.

3. **SCHEDULE RECORDING**
   When schedule recording (ALARM / MOTION DETECTION / CONTINUE RECORD) has been activated, recording **cannot** be stopped by pressing “STOP” button. It has no function when pressed during schedule record time.

4. **RECORDING WILL STOP**
   After entering playback mode or menu setup, when correct password has been entered, all recording activities will stop. When exiting playback mode or menu setup, if schedule recording has been switch on, schedule recording will automatically start.

5. **POWER ON AFTER POWER LOSS**
   If the DVR is powered on after a power loss, the system automatically returns to the recording mode it was in before the power loss.

PLAYBACK MODE



1. PLAY

Press “PLAY” button, to playback starting from the previous playback end time. Press “SEARCH” button to quickly search playback according to channel, date, and time. Press “PLAY” or “ENTER” button to playback.

When “PASSWORD FOR PLAYBACK” is set to “ON”, password is requested when “PLAY” or “SEARCH” button is pressed. System enters 9-split screen display when correct password has been entered. Note that once password has been entered, all recording activities will stop.

2. NO PASSWORD DISPLAY

If the main password or the playback password is switched off, or the password has been copied onto the C.F card and has been inserted into DVR, on pressing PLAY, the system enters playback mode and will not request a password.

3. DISPLAY BUTTON

Press “DISP” button to switch channel, date, and time message display “ON/ OFF”.

4. INFORMATION BUTTON

Press “INFO” to switch system information display “ON / OFF”.

5. CHANNEL BUTTONS

Press “CH” button to playback full screen images (CH1 – CH8).

6. SPLIT BUTTON

Press “SPLIT” button to switch to Full Screen/ Quad Screen or 9-Split Screen.

7. SEQUENCE BUTTON

The SEQ function does not operate in playback mode.

8. PAUSE BUTTON

Press “PAUSE” button, to pause during normal playback. During pause, press LEFT button to step rewind playback or RIGHT button to step forward playback.

9. PLAYBACK SPEED ADJUSTMENT

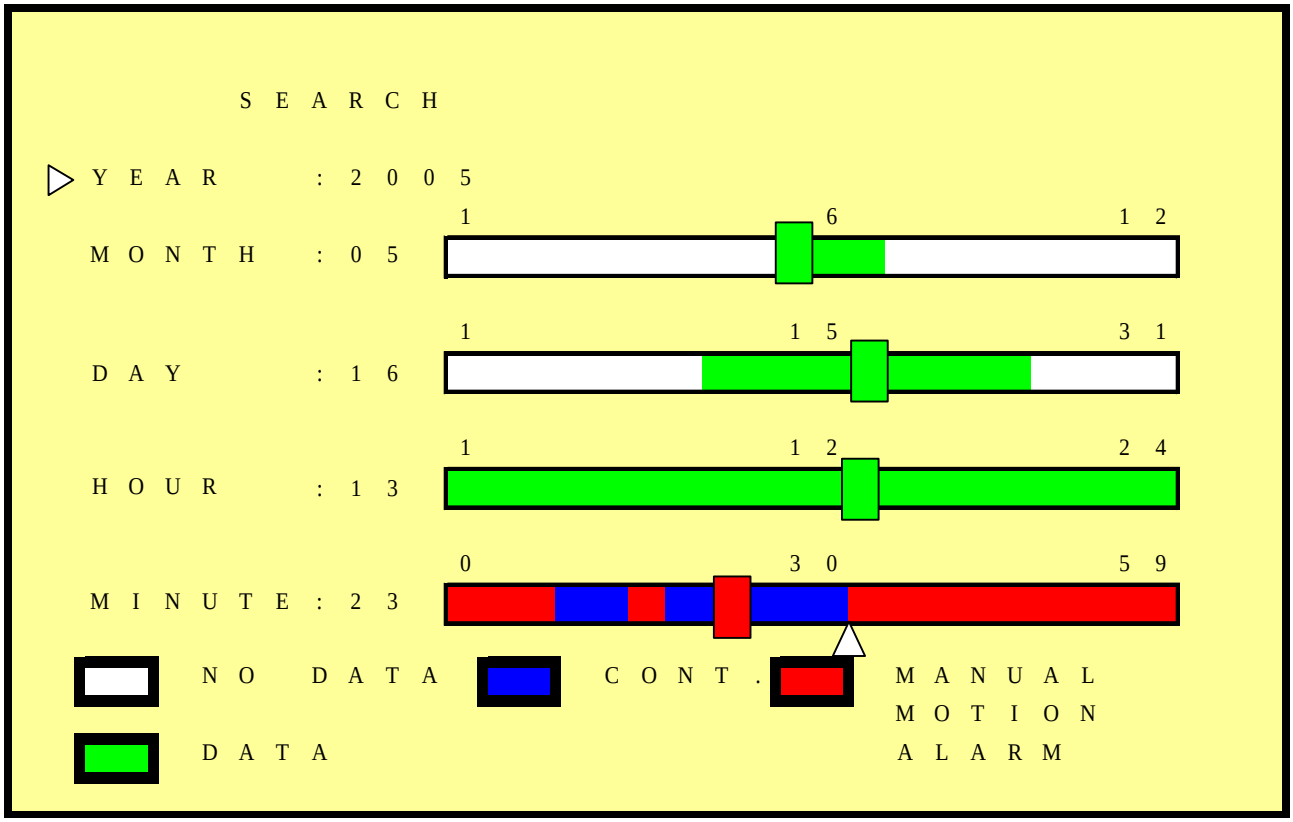
During normal playback, press “LEFT” button to adjust the rewind playback speed (x1 / x2 / x4 / x8 / x16 / x32 / x64) and “RIGHT” button to adjust forward playback speed (x1 / x2 / x4 / x8 / x16 / x32 / x64). Press PLAY button to return to normal speed.

10. STOP BUTTON

Press STOP button to stop playback and return to live monitoring mode or schedule record mode.

SEARCH

Quick search function by date and time, press SEARCH button to show the display below:



1. YEAR/ MONTH/ DAY/ HOUR:

- White Index Bar: No recorded data available under this date period.
- Green Index Bar: Recorded data available under this date period.

2. MINUTE:

- White Colour Bar: No recorded available under this time period.
- Red Colour Bar: Manual recorded data, motion detection recorded data, and alarm recorded data is available under this time period.
- Blue Colour Bar: Schedule recorded data is available under this time period.

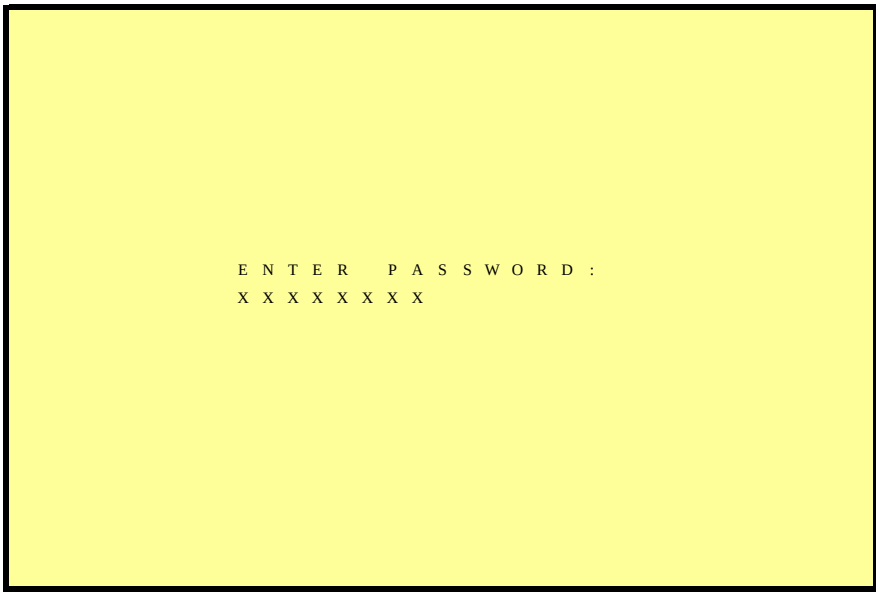
3. UP / DOWN BUTTONS

Use “UP/ DOWN” buttons to move the cursor to the desired item (YEAR/ MONTH/ DAY/ HOUR/ MINUTE), use “LEFT/ RIGHT” buttons or drag the index bar to make changes on the setup.

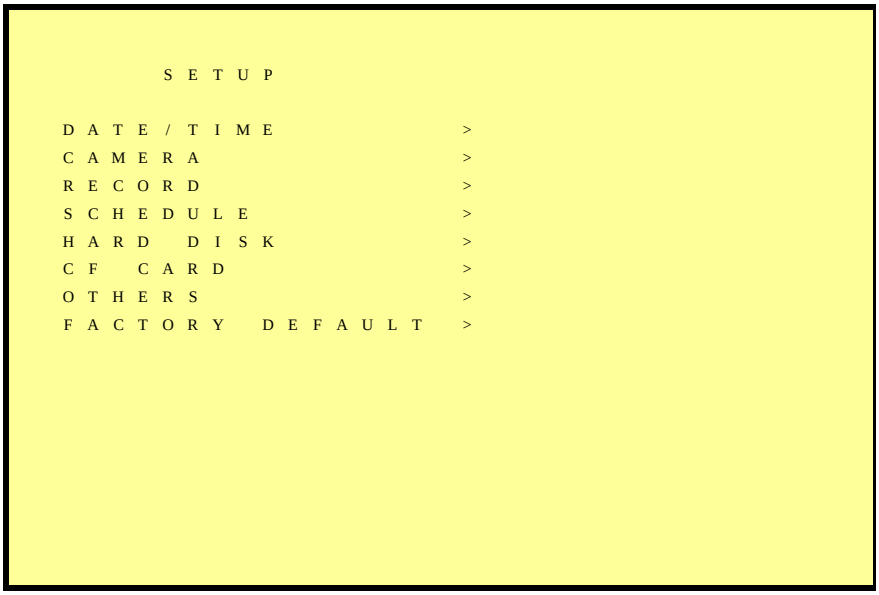
After setup has been completed, press “PLAY” or “ENTER” button to enter play mode, or “EXIT” button to return to live monitoring mode.

MENU SETUP DESCRIPTION

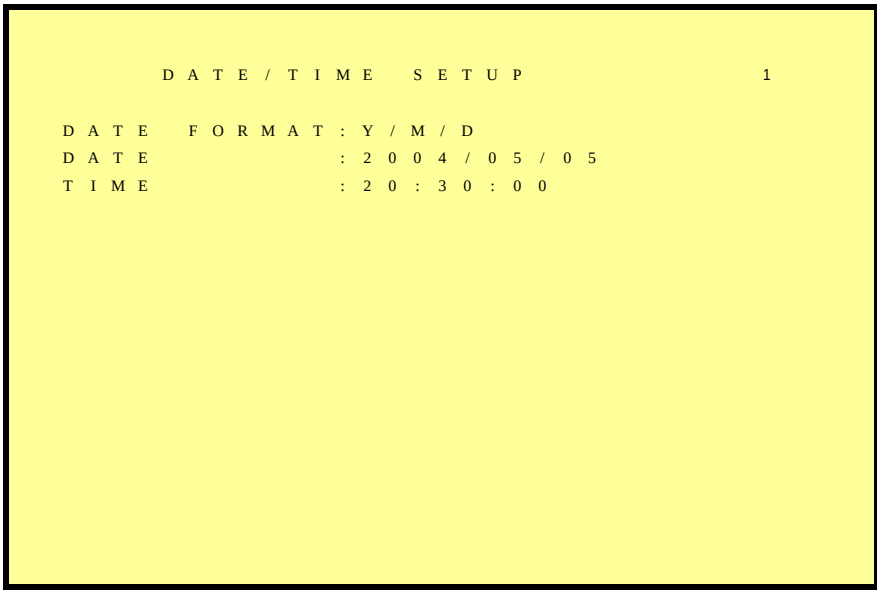
Password is requested after “MENU” button is pressed. Default Password: 12345678 (CH1~CH8 represents number 1~8).



In order to enter the main menu, password entered must be correct. After entering the main menu the system will auto stop schedule recording.



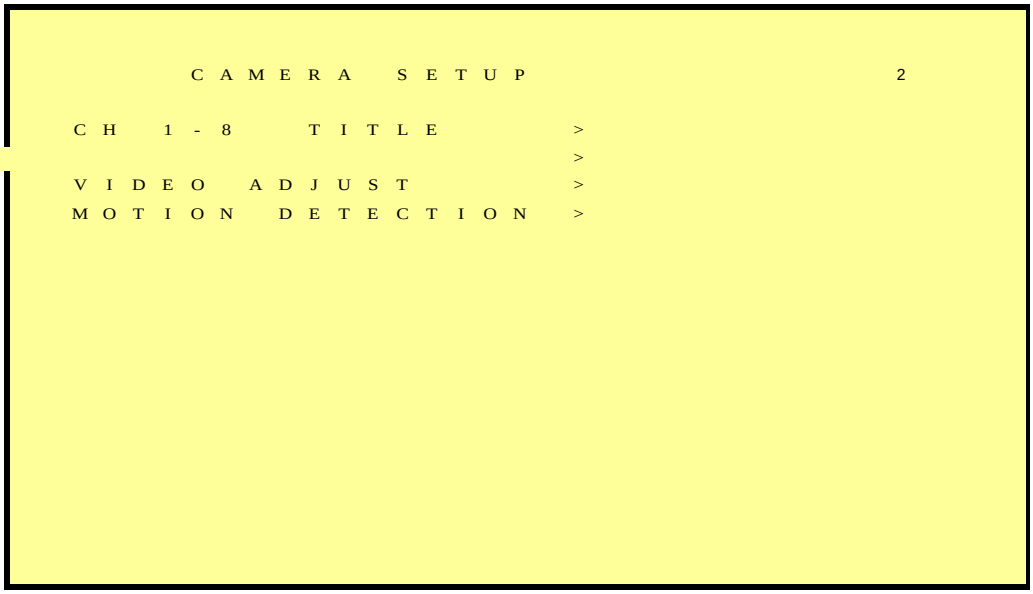
DATE / TIME SETUP



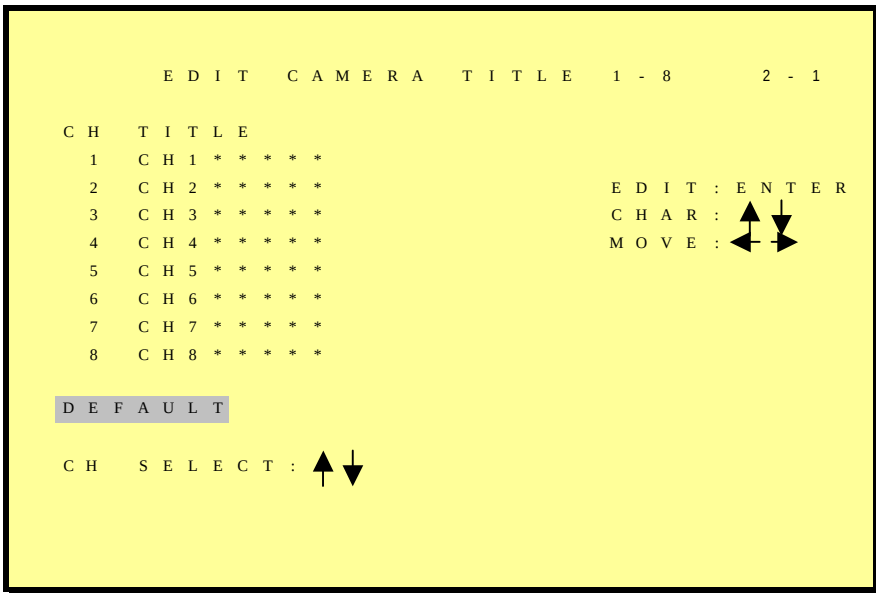
DATE FORMAT (Three Types of Date Format Setup) :

1. YY/MM/DD: Year/ Month/ Day
2. MM/DD/YY: Month/ Day/ Year
3. DD/MM/YY: Day/ Month/ Year

CAMERA SETUP

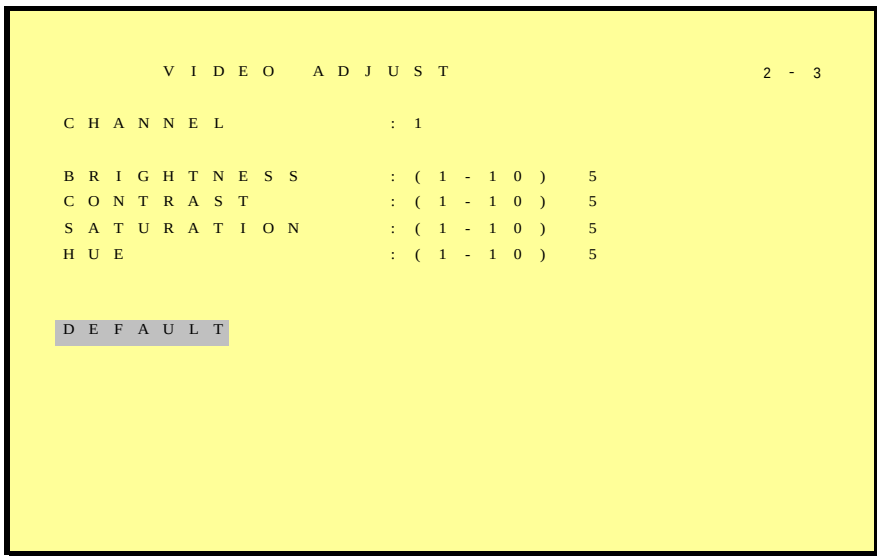


EDIT CAMERA TITLE 1 ~ 8



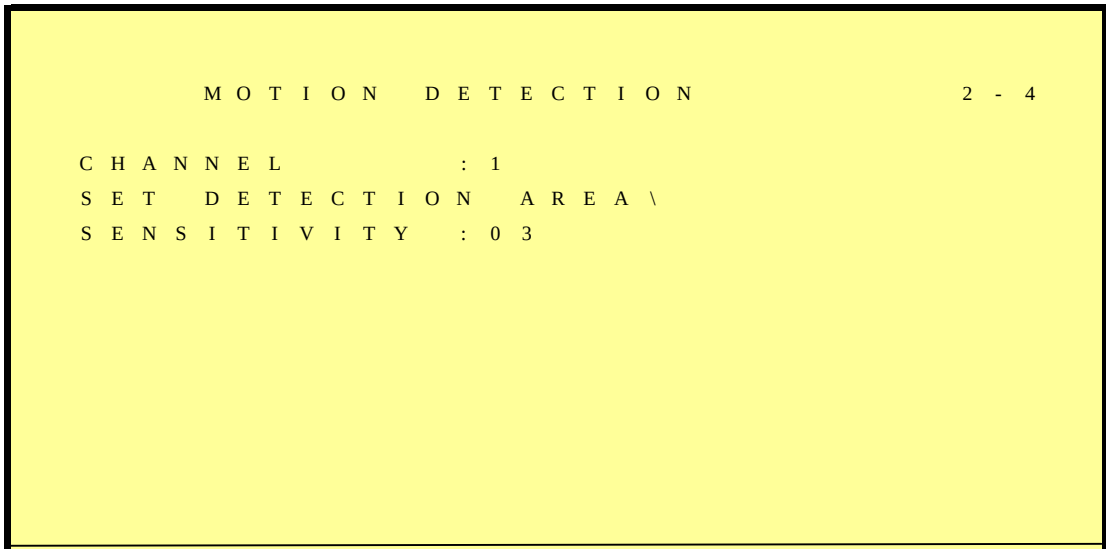
1. Maximum 8 character title setups.
2. Move the cursor to the desired camera number by using “UP/ DOWN” button
3. Move between the characters (camera title) by using “LEFT/ RIGHT” button and use “UP/DOWN” button to edit the camera title (letters A-Z, numbers 0-9 or blank spaces).

VIDEO ADJUST



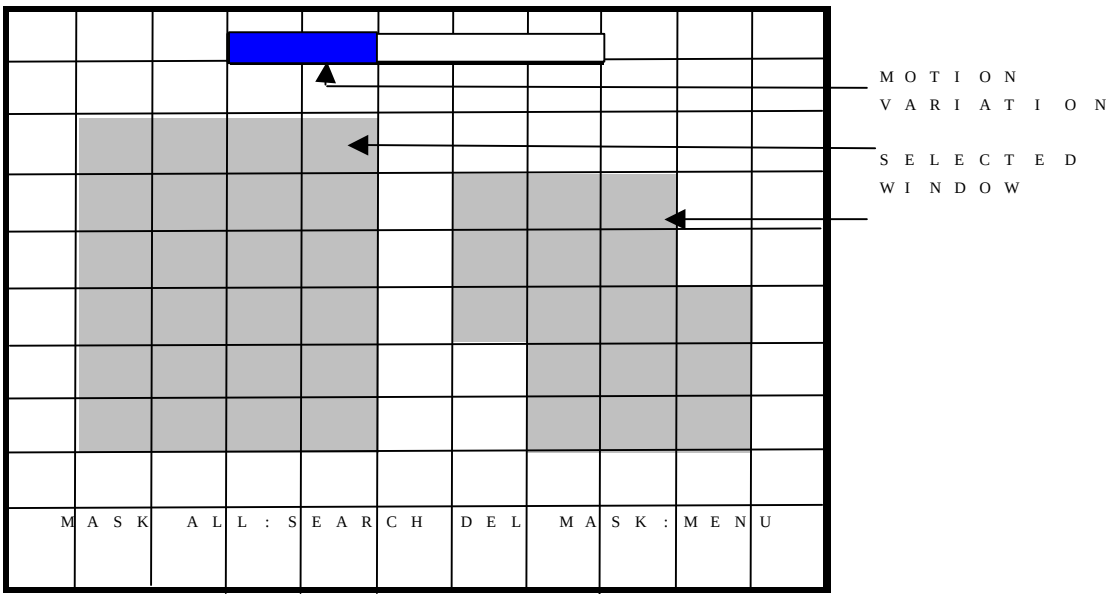
Adjustable brightness, contrast, saturation, and hue for Channels 1 – 8 CH videos.

MOTION DETECTION



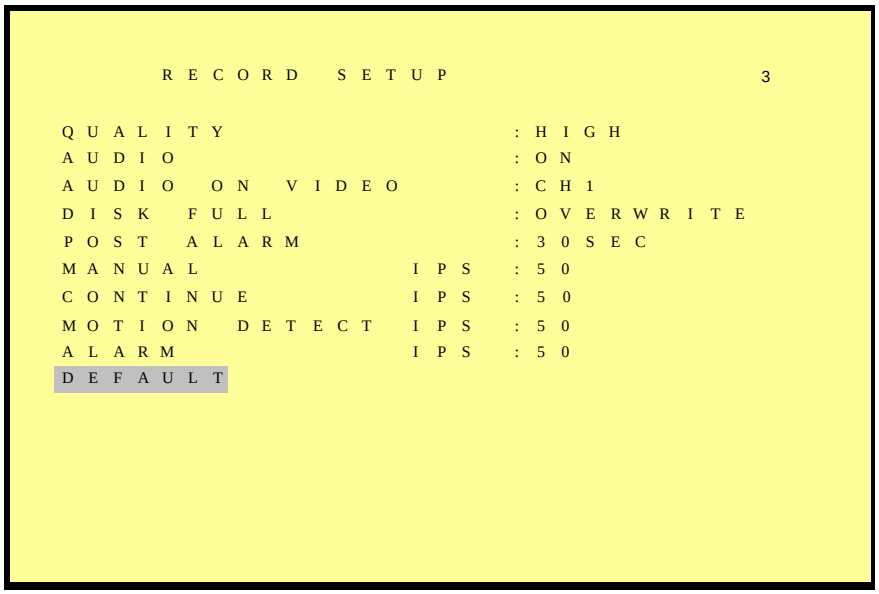
1. SELECT CAMERA CHANNEL 1 ~ 8
2. SELECT "SET DETECTION AREA" TO ENTER MENU BELOW
3. SELECT MOTION DETECTION SENSITIVITY RATE 01 ~ 05

MOTION DETECTION - SET DETECTION AREA



1. Blue bar shown above indicates the motion variation of the detection window, when motion event exceeds the sensitivity setup, it triggers motion detection recording.
2. Full Screen Display: NTSC is divided into 11 x 10 and PAL is divided into11 x 12 detection block.
3. Area Block Color:
   - Grey: Detection Block.
   - Transparent: Non-Detection Block.
   - Green: Motion Detection Block.
4. Press “SEARCH” button to enable whole detection area.
5. Press “MENU” button to disable whole detection area.
6. Maximum Three Detection Area Setup (Detection area may overlap):
   - Use “UP/ DOWN/ LEFT/ RIGHT” button to setup the starting point of the detection area.
   - Press “ENTER” button to confirm the starting point of the detection area.
   - Use “UP/ DOWN/ LEFT/ RIGHT” button to setup the ending point of the detection area.
   - Press “ENTER” button to confirm the ending point of the detection area.

RECORD SETUP



1. QUALITY: LOW/ MEDIUM/ HIGH.
2. AUDIO:

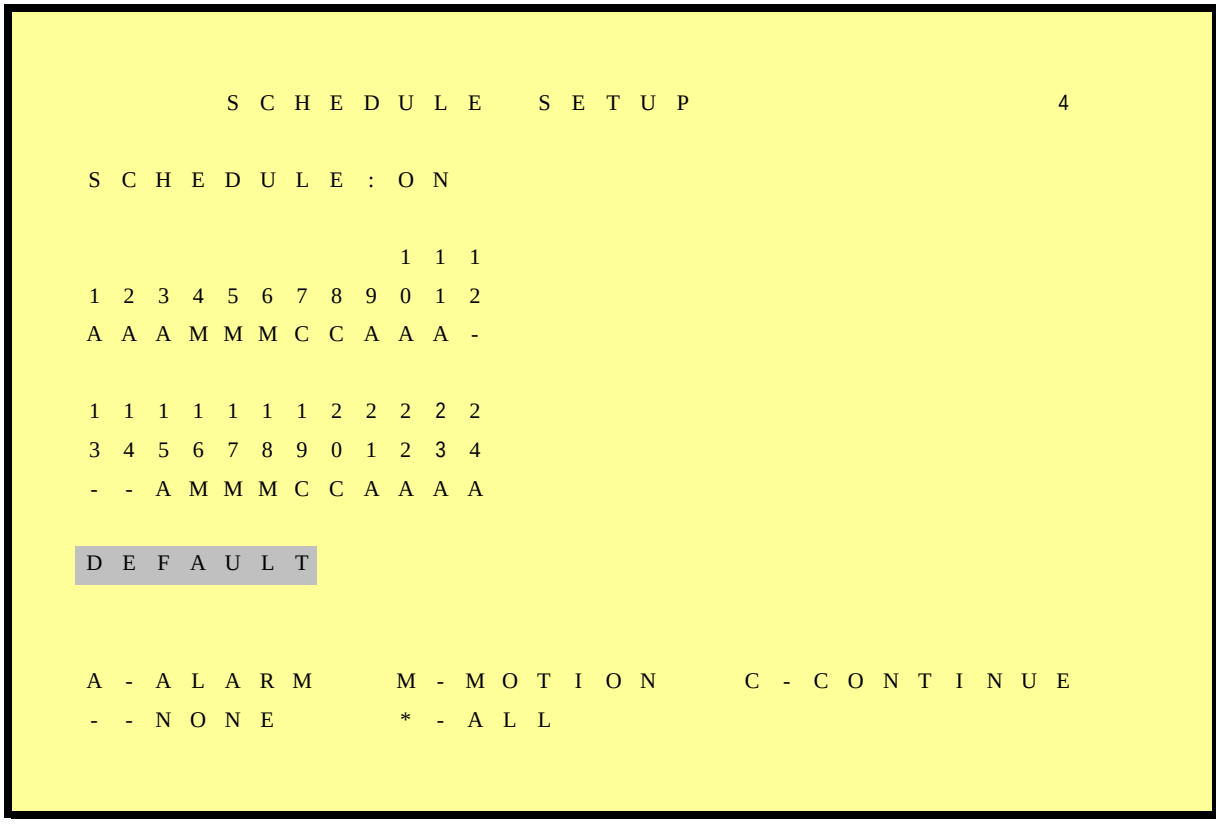
   ON: Audio recording enabled.

   OFF: Audio recording disabled.
3. AUDIO ON VIDEO: Enable audio and video recording (CH1 – CH8).
4. DISK FULL:

   Overwrite: When the disk is full the system overwrites the old data.

   Stop: When the system is full the system stops recording (message will be displayed).
5. POST ALARM: Recording time after an event (Alarm/ Motion Detection) has been triggered.
6. MANUAL: IPS by manual recording.
7. CONTINUE: IPS by schedule continuous recording.
8. MOTION DETECT: IPS by schedule motion detection recording.
9. ALARM: IPS by schedule alarm recording.
10. DEFAULT: Reload the factory default setting.

SCHEDULE SETUP


SCHEDULE SETUP 4
SCHEDULE:ON
1 1 1
1 2 3 4 5 6 7 8 9 0 1 2
A A A M M M C C A A A -
1 1 1 1 1 1 1 2 2 2 2 2
3 4 5 6 7 8 9 0 1 2 3 4
- - A M M M C C A A A A
DEFAULT
A-ALARM M-MOTION C-CONTINUE
--NONE *-ALL

Three Types of Schedule Recording Setup:

1. CONTINUE RECORD: Continuous recording according to the setup of the schedule time.
2. MOTION DETECT RECORD: Motion detection recording according to the setup of the schedule time.
3. ALARM RECORDING: Alarm trigger recording according to the setup of the schedule time.

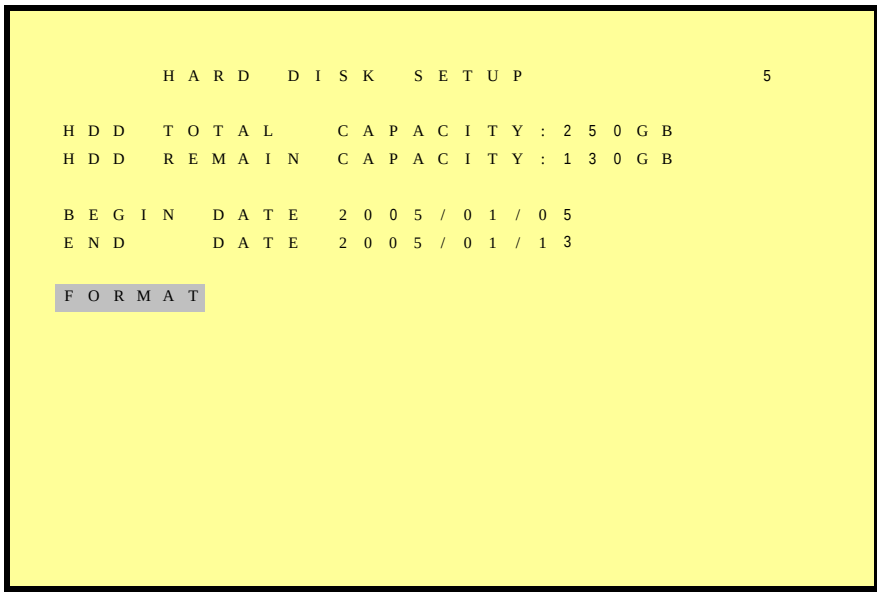
- Optional Settings: Each hour individually setup to different recording modes, combined settings or even no settings are acceptable.
- During schedule recording when manual recording is applied, the system auto switches to manual recording (manual recording is the first priority recording).

Record Mode Priority:

Manual Record ~ Alarm Record ~ Motion Detection Record ~ Continuous Record

SPECIAL NOTE: The machine default is * for each hour for continuous recording.

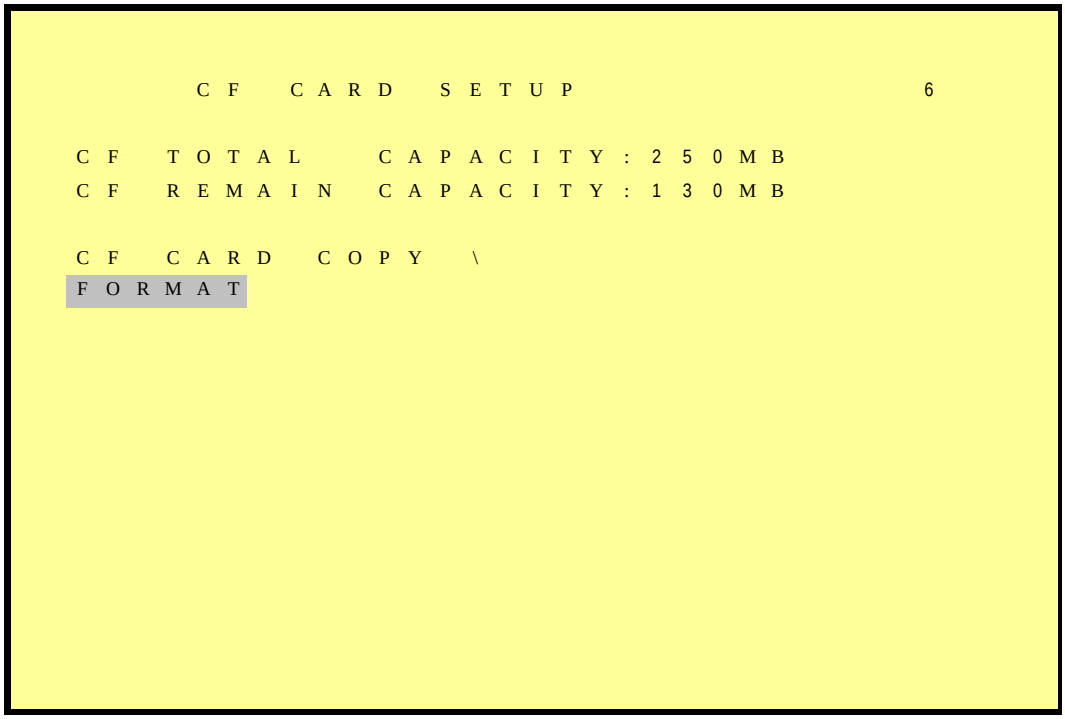
HARD DISK SETUP



Displays the begin and end date of the recorded material and when no recorded materials are available, current date is displayed.

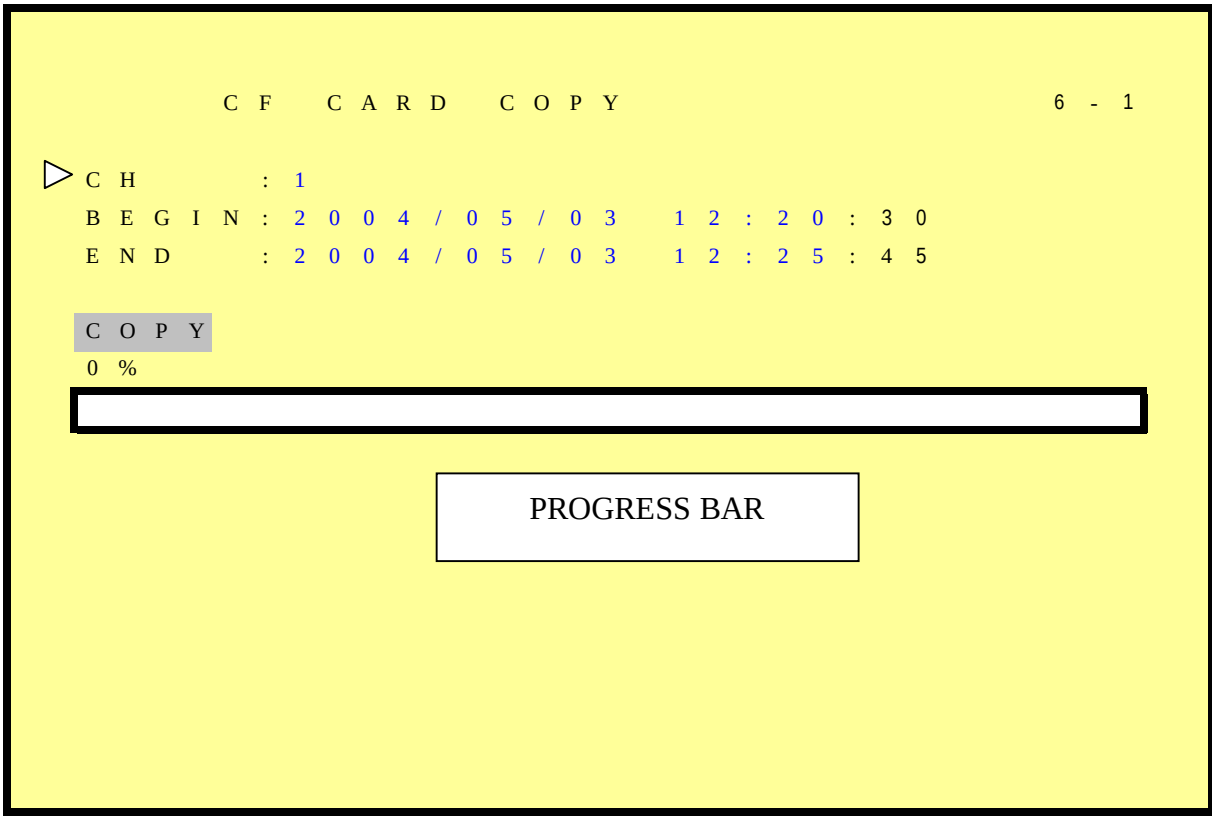
FORMAT: Format the HDD.

CF CARD SETUP



1. CF TOTAL CAPACITY: Total Capacity
2. CF REMAIN CAPACITY: Remaining Capacity
3. CF CARD COPY: Copy the selected file to the CF card.
4. FORMAT: Delete all data stored in the CF card.

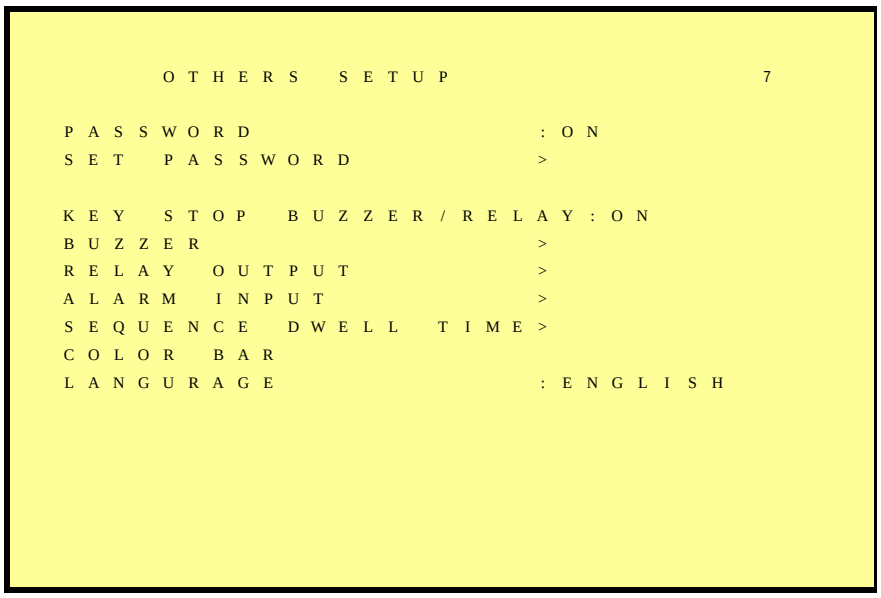
CF CARD COPY



1. CH: Selectable 1 -8 camera option.
2. BEGIN/ END: The system will start coping according to the setup (begin and end time).
3. COPY: Select “COPY” to start copy.

*When the data size selected exceeds the storage capacity of the CF card, it will start copying from the beginning and stop when CF card is full. Different channels and different events setup generate different AVI files (audio data follows its corresponding video file). PC supports AVI file playback (File size is 720X240. When using a computer to playback, the video aspect ratio is not 1:1, please use a player with adjustable video aspect ratio).

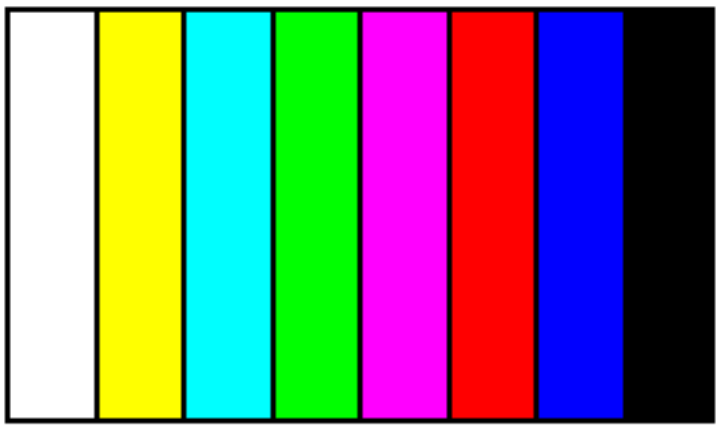
OTHERS



1. PASSWORD:
ON: Enable password protection, password is required before entering the main menu.
OFF: Disable password protection, password will not be required before entering the main menu.

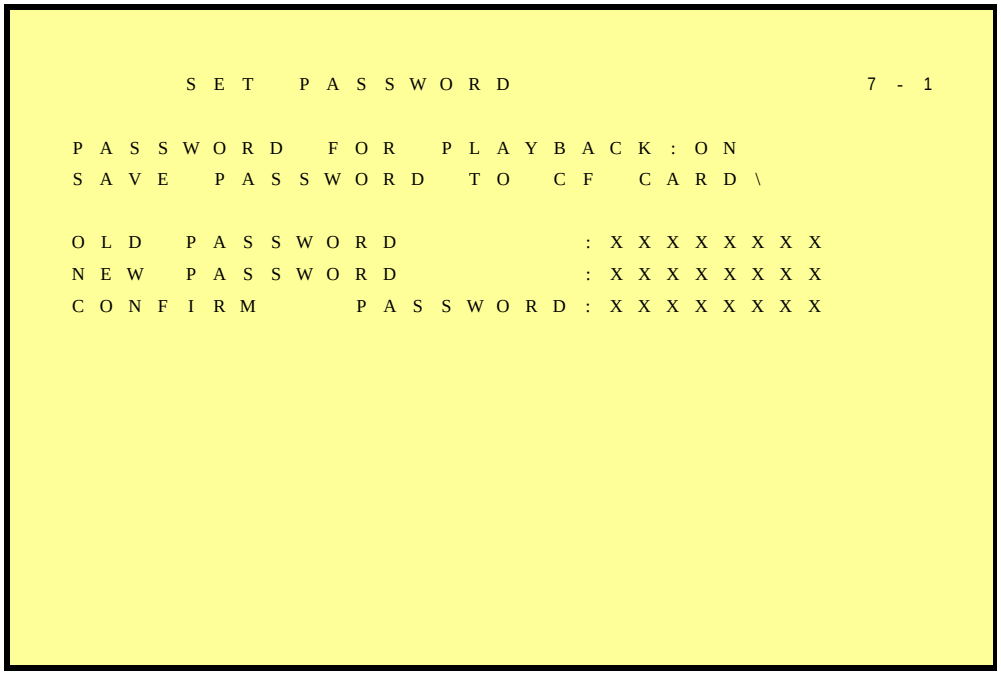
2. KEY STOP BUZZER/ RELAY:
When buzzer or relay device is triggered by an event, press any key to deactivate.

3. COLOUR BAR: By using the colour bar, the user may adjust the colour of the monitor.



4. LANGUAGE: Supports English and Chinese on-screen menus and displays.

PASSWORD


SET PASSWORD 7 - 1
PASSWORD FOR PLAYBACK : ON
SAVE PASSWORD TO CF CARD \
OLD PASSWORD : XXXXXXXX
NEW PASSWORD : XXXXXXXX
CONFIRM PASSWORD : XXXXXXXX

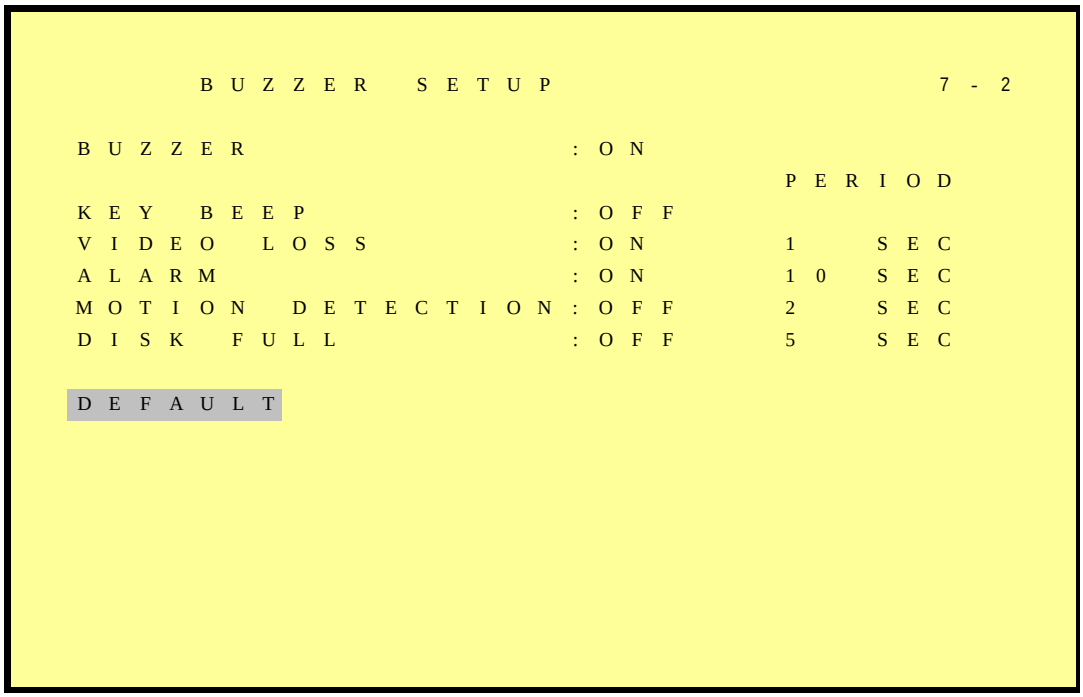
1. PASSWORD SETUP
If you are using a password for accessing the unit, select a numeric password of up to eight characters using the Channel 1 to Channel 8 buttons. Default password = 12345678

2. Press “ENTER” button to enter new password, confirm settings, and press “EXIT” button to exit.

3. For long- hour searching, one may disable the playback password and enable it after searching has been completed.

4. When password is stored on the CF card, after inserting the CF card, the system will not request a password to be entered.

BUZZER


BUZZER SETUP 7 - 2
BUZZER : ON
PERIOD
KEY BEEP : OFF
VIDEO LOSS : ON 1 SEC
ALARM : ON 10 SEC
MOTION DETECTION : OFF 2 SEC
DISK FULL : OFF 5 SEC
DEFAULT

BUZZER: Embedded buzzer sounding.

ON: Buzzer is enabled.

OFF: Buzzer is disabled.

Period: Duration time of the buzzer output.

Buzzer event includes the following:

1. KEY BEEP: If set to ON a beep will occur on each key depression.

2. VIDEO LOSS: If set to ON unit will beep for period set if video loss occurs

3. ALARM: If set to ON unit will beep for period set if alarm is triggered.

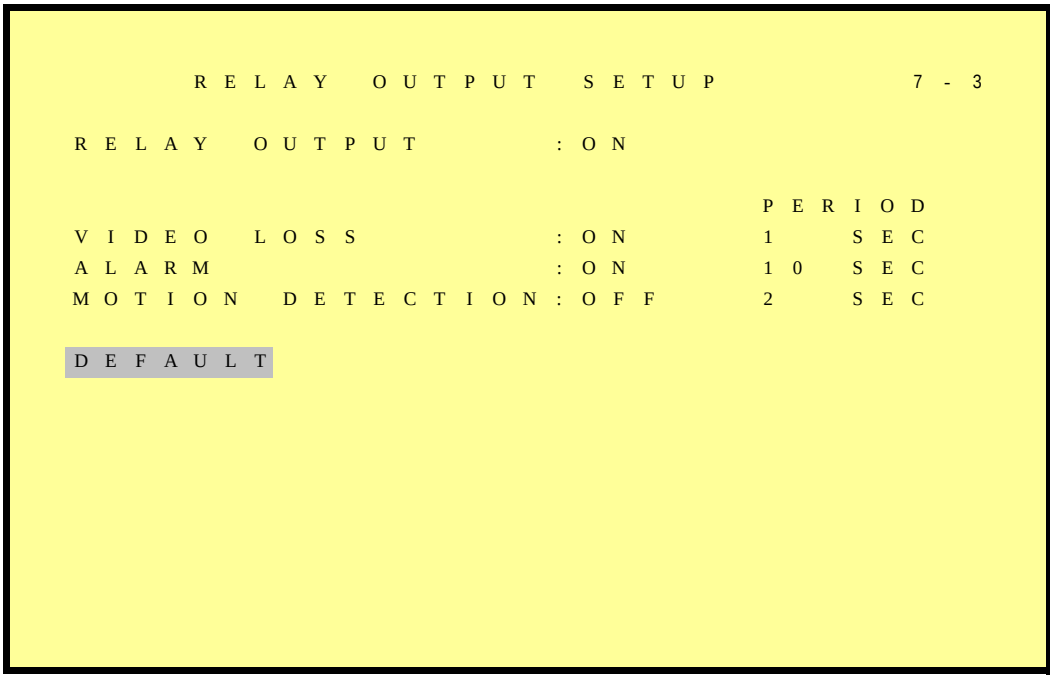
4. MOTION DETECTION: If set to ON unit will beep for period set if motion detected.

5. DISK FULL: If set to ON unit will beep when disk is full. System has stopped recording.

This only occurs if DISK FULL is set to STOP in the RECORD SETUP menu. If you are using

OVERWRITE mode then ensure this option is switched OFF.

RELAY OUTPUT



RELAY OUTPUT: Relay output can be connected to external sounding device or warning device.

Two Types (NO/ NC) of Relay Output Setup:

ON: Relay output enabled.

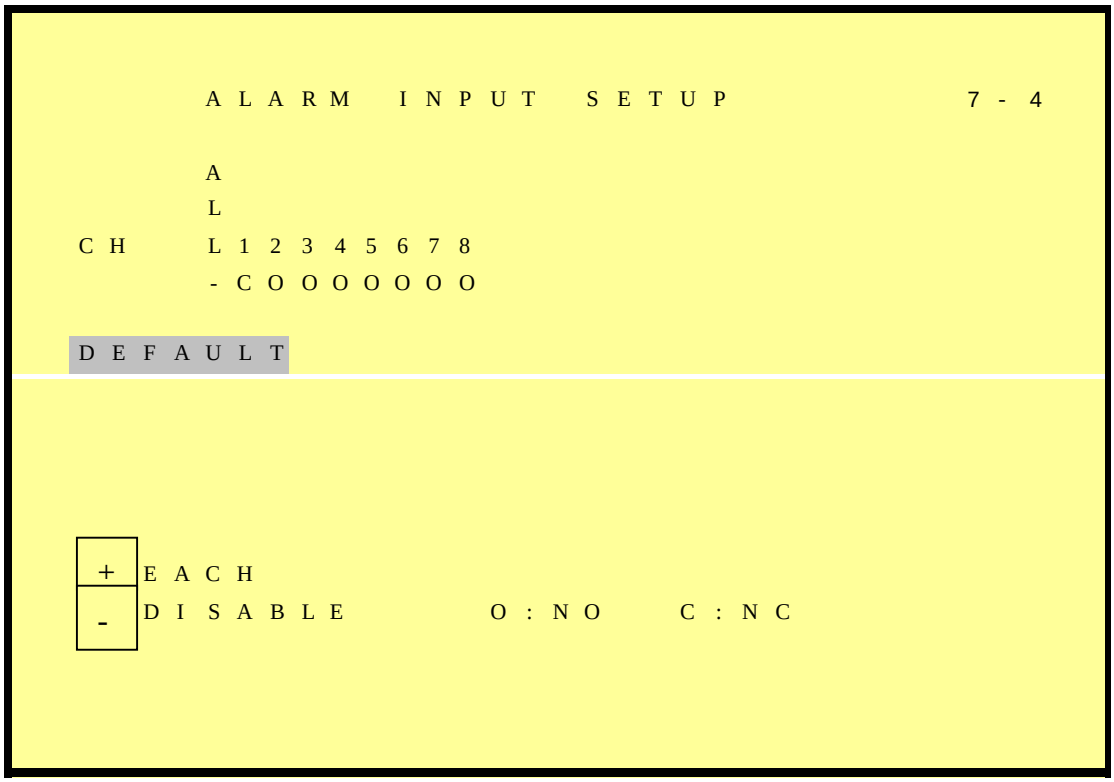
OFF: Relay output disabled.

PERIOD: Duration time of the relay output.

Relay output event includes the following:

1. VIDEO LOSS: Triggered by video loss.
2. ALARM: Triggered by external alarm.
3. MOTION DETECTION: Triggered by motion detection.

ALARM INPUT



SENSOR TYPE

NC → Normal Close Alarm (TTL level input)
Setup NC (Normal Close), the alarm will be triggered during NC status.

NO → Normal Open Alarm (TTL level input)
Setup NO (Normal Open), the alarm will be triggered during NO status.

ALL

+ (EACH): Alarm input can be individually setup to NC or NO.

- (DISABLE): Disable alarm input can be individually setup.

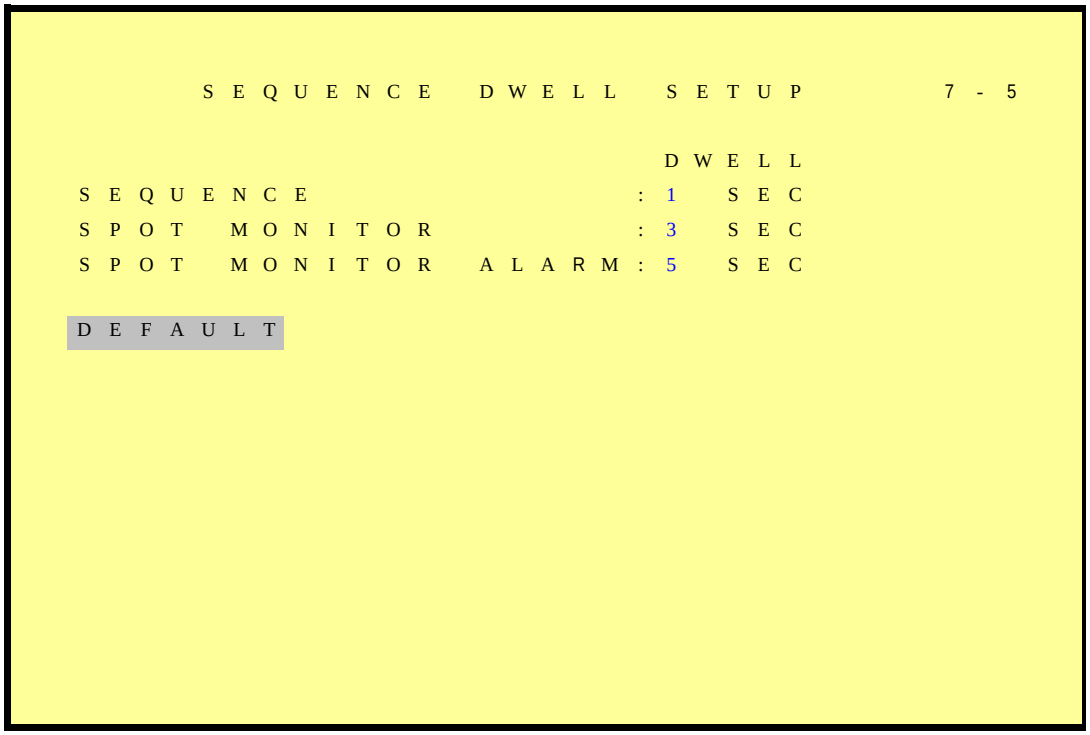
NC: All alarm input is setup to NC.

NO: All alarm input is setup to NO.

The alarm input setup screen allows ALL channels to be set as O = NO, C = NC or - = disabled.

If setting individual channels ensure ALL = - and channels for alarm inputs reflect O = NO or C = NC

SEQUENCE DWELL TIME

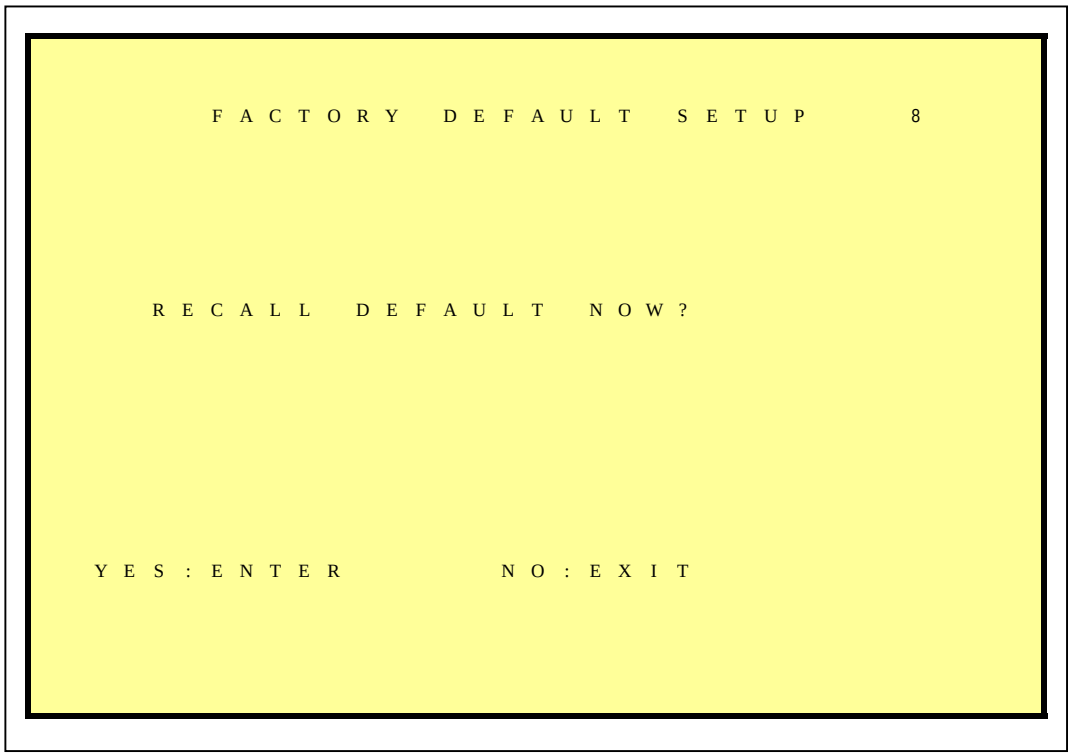


1. **SEQUENCE:** Main display sequence dwell time setup.

2. **SPOT MONITOR**: SPOT monitor dwell time setup.

3. **SPOT MONITOR ALARM**: SPOT monitor alarm dwell time setup.

FACTORY DEFAULT



To return to factory default setting, select “YES” option and then press “ENTER” button to reload the factory default setting. Press “EXIT” to exit.

HARD DISK INFORMATION & RECORDING TIMES

1. Supports 3.5” ATA 2/ 3/ 4/ 5/ 6 format hard disk.
2. Enables installation of removable hard disk.
3. Supports high-capacity hard disk storage (up to 750Gb capacity).
4. Note this DVR does not support a Hot swap function. To prevent damage, please enter the menu and stop all HDD activities then switch off the device before changing the hard disk.
5. When the hard disk information icon turns red, the DVR is confirming that the hard disk requires replacement.

		80 Gb HDD Possible Recording Time (by day)						
Frame Rate across all channels		50	25	12	6	3	2	1
Image Quality	Low	1.5	3	6	12	24	48	96
	Standard	.76	1.5	3	6	12	24	48
	High	.4	.8	1.6	3.2	6.4	12	24

		250 Gb HDD Possible Recording Time (by day)						
Frame Rate across all channels		50	25	12	6	3	2	1
Image Quality	Low	3.9	9.7	17	29.2	51.3	72.5	137
	Standard	2.9	6.5	12.2	22.1	40.5	58.3	112
	High	1.4	2.9	5.9	11.6	22.7	33.7	66.8

		750 Gb HDD Possible Recording Time (by day)						
Frame Rate across all channels		50	25	12	6	3	2	1
Image Quality	Low	11.7	29.1	51	87.6	153	217	411
	Standard	8.7	19.5	36.6	66.3	121	175	336
	High	4.2	5.7	17.7	34.8	68.1	101	200

NOTE: The above timings are average times calculated running at different resolutions. The content of the video image can vary considerably so storage time quoted above is only a guide.

DB25 Alarm Input/Relay Output Definition

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	ALARM 1	2	ALARM 2	3	ALARM 3	4	ALARM 4
5	GND	6	ALARM 5	7	ALARM 6	8	ALARM 7
9	ALARM 8	10	GND	11		12	
13		14		15		16	
17		18		19		20	
21	RELAY OUT-COM	22	RELAY OUT-N.C.	23	RELAY OUT-N.O		

RS-232C Terminal Control Definition

Baud rate: 115200 bps, Data bit: 8, Parity bit: None, Stop bit: 1

REC	'R' 'r'	UP	'U' 'u'	CH1	'1'
STOP	'Z' 'z'	DN	'J' 'j'	CH2	'2'
PLAY	'P' 'p'	FF/+	'F' 'f'	CH3	'3'
PAUSE	'T' 't'	REW/-	'W' 'w'	CH4	'4'
SPLIT	'D' 'd'			CH5	'5'
SEQ	'E' 'e'			CH6	'6'
SEARCH	'S' 's'			CH7	'7'
MENU	'M' 'm'			CH8	'8'
EXIT	'I' 'I'				
ENTER	'N' 'n'				

TECHNICAL SPECIFICATION

Video	**Format**	NTSC / PAL Auto Detection
	Video Loss	Auto Detection
	Codec	Motion-JPEG
	Input	8 CH BNC (1.0 Vp-p. / 75 Ohms)
	Main Display	2 CH BNC (1.0 Vp-p. / 75 Ohms)
	Spot Output	1 CH BNC (1.0 Vp-p. / 75 Ohms)
Audio	**Input**	1 CH RCA
	Sampling	8 kHz
	Codec	G.711
	Output Bit	64 kbps
	Output	2 CH RCA
Live	**Resolution**	704 x 240 (NTSC), 704 x 288 (PAL)
	Frame Rate	240 fields/sec (Total)
	Mode	Single / Quad / 9-Split / Sequence
Record	**Resolution**	704x288 (PAL)
	Frame Rate	Maximum (Total): 50 frames per sec 704 x 288 (PAL)
	Quality	Low / Medium/ High
	Mode	Manual / Alarm In / Motion Detection / Continue
Play	**Speed**	Normal / Pause / Fast Forward x2, x4, x8, x16, x32, x64/ Fast Rewind x1, x2, x4, x8, x16, x32, x64
	Mode	Single / Quad / 9-Split
Alarm	**Input**	8 CH, NC/NO (Programmable)
	Output	1 CH, NC/NO
Storage	3.5” IDE HDD x 1 (not included), Max. 750 Gb, Fixed HDD (optional)	
Backup	Type I CF Card x 1, AVI file format	
LED	Alarm / Play / HDD / Record	
Serial	RS-232C x 1 (Male connector with remote control protocol)	
OSD	English / Traditional Chinese	
Power	12V / 4.2A	
Power	AC 100~240 V Input, DC 12V / 4.2A Output	
Dimension	**430 (W) x 70 (H) x 316 (D) mm**	
Weight	3570 g (without HDD)	
Storage	30 ~ 90% RH, -5C° ~ 50 C°	
Operation	30 ~ 80% RH, 0 C° ~ 45 C°	

(Note: Design and specifications are subject to change without prior notice.)